USER'S MANUAL FOR THE AFHRL MODEL DATA BASE

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B-1. INTRODUCTION

B-1.1 DESCRIPTION

The Avionics Central system is a real-time, on-line, full-text, interactive information storage and retrieval system.

'Real-time' means that the responses to queries are normally received in 30 seconds or less, irrespective of the size of the files, or the number of terminals concurrently querying the system.

'On-line' means that the system is available to all qualified users during the prescribed hours of operation.

'Full-text' means that every word in every document stored in the system is available for retrieval. (Except common words such as AND, OF, THE, etc.) This provides for an extremely powerful search capability.

'Interactive' means that the computer communicates with the user, and leads him step by step through the query process. Appropriate diagnostic messages are displayed when he makes an error, permitting him to back up and correct the error.

This manual has been prepared to give new users an understanding of the basic steps in performing information searches of the AFHRL file of comprehensive abstracts on the Avionics Central computer.

B-1.2 TERM DEFINITIONS

Definitions of terms used in the manual are listed in the order in which they appear in the operating instructions.

MESSAGE - As used here, means a computer instruction presented on the display device of the user. A diagnostic message appears when some error or system limit occurs.

RESPONSE - The action of the user in connection with a received message.

FILE - An organized array of similar information. For the AFHRL data base, the information contained in comprehensive abstracts represents a file.

MESSAGE OPTION - The choice of communication with the computer which is selected by the user. The long form (which is used throughout this manual) is for less experienced users. More experienced users normally will select the cryptic short form to expedite the query.

ACRONYM - Abbreviations used for the names assigned to individual files and segments of files.

SEGMENT - A section of a file; corresponds to a block or field on a standard form. Sometimes called a 'data element'.

OPERATOR - A computer term which tells the computer the manner in which a query is to be made, i.e., find documents which contain the search subject, or discard documents which contain specified terms to be negated.

ARGUMENT - The search subject, i.e., the term, phrase or value within a segment to be searched. The specific argument should correspond to data which could be expected to be found in the segment(s), e.g. an author's name within the AUTHOR segment. For segments containing text, words or word phrases serve as arguments. In most cases, the argument is entered in plain English. The computer has a subprogram which converts plurals to singulars and searches on both variations of a word, i.e., 'studies' will retrieve both 'study' and 'studies'.

$ - A computer instruction which tells the computer that the word immediately following (segment acronym) is where to look for the search subject (argument).

CONNECTOR - A Boolean AND (intersection) or OR (union) which instructs the computer how the elements of the search are to be combined.

ENTRIES - Corresponds to 'documents'. Refers to the number of individual documents located as a result of performing a search.

MODIFY - A process whereby the user can add additional conditions to his original request. In general, it is used to go from a broad subject search to a more specific search and results in a more relevant search. Carried to the extreme, the user usually winds up with the message "NO ANSWER FILLS REQUEST". No matter; the user can return to any previous level of modification, and display the results of that particular search.

OUTPUT - Refers to those sections of the documents identified as the result of a search which will be presented on the display or printed at the central facility. Six options are currently available, as indicated in the instructions, Paragraph 2.5.1. For all options the Avionics Central Accession number is always presented.

SEQUENCE - The process of arranging the retrieved documents in some prescribed order prior to display. The Avionics Central system currently permits five hierarchical levels of sequencing, which is adequate for most purposes.

ACCESSION NUMBER - A unique number assigned to each individual document stored in the system. Used internally by the computer to identify documents, and by the user to identify specific documents.

SORT LENGTH - In the sequencing or sorting process, the computer arranges the retrieved documents in order, character by character, on the information in the selected segment. In general, the sort length is chosen by the user as the minimum number of characters which will put the documents in the proper sequence. For short segments, a low number is specified; for long segments, a large number is provided.

MODE - In context with this manual, mode refers to whether the user wants the documents sequenced in ascending or descending order. For alphabetical segments, they will be in alphabetical order. For numerical segments, they will be in numerical order.

QUERY - Synonymous with 'Request'.

RECURSIVE COMMAND - Commands by which the user may interrupt the normal sequence of interaction. They permit him to skip forward or backward, change style of output, change the span of keywords-in-context, etc., and other 'goodies' which give him extreme flexibility in manipulating the response of the computer. These commands are available only with CRT terminals.

DIAGNOSTIC MESSAGES - Whenever the user makes an error, or some system limit is exceeded, the computer presents a diagnostic message to the user. All messages are followed by a 3-digit number in parentheses, i.e., (xxx). In the event that the user does not understand the diagnostic message, he can invoke a tutorial message which explains the diagnostic message; the user can usually then determine what action to take next.

TUTORIAL MESSAGES - The Avionics Central system has a built-in series of tutorial messages whereby, if a user is confused as to what he should do in response to a given message from the computer, all he has to do is enter the Recursive Command $$WHAT and the computer will display a complete explanation of what he is required to do. By pressing the End, Reset, and Transmit keys or the control key and s key simultaneously for a teletype terminal, the computer returns to the previous point at which a user response was required and permits him to respond.

B-2. OPERATING INSTRUCTIONS

B-2.1 STARTING UP

There are a number of communications terminals available. Basically, these are Cathode Ray Tube (CRT), thermal printing devices, and teletype terminals. Each terminal has its own operating characteristics, but the fundamental procedures are the same. When the terminal is ready for operation, communication with the Avionics Central computer is established by dialing the proper telephone number. You should hear a high-pitched tone signal. - The telephone should then be inserted immediately into the acoustic coupler. For convenience, computer messeges will be shown in all upper case letters, user responses will be shown in all lower case letters. An initial message will be displayed as follows:

MESSAGE

YOU ARE NOW IN COMMUNICATION WITH AVIONICS

CENTRAL (ØØØ)

PLEASE ENTER 1Ø CHARACTER IDENTIFICATION. (ØØ2)

REPLY

RESPONSE

ENTER YOUR ASSIGNED NUMBER ON KEYBOARD

PRESS CONTROL AND X-OFF (S) KEYS SIMULTANEOUSLY

(RETURNS CONTROL BACK TO COMPUTER)

B-2.2 COMMUNICATING

MESSAGE

ENTER FILE, MESSAGE OPTION. (ØØ)

RESPONSE

afhrl, lkwic (cntrl s)

B-2.3 REQUESTING A SEARCH

B-2.3.1 General Procedure

MESSAGE

ENTER REQUEST. (Ø48)

RESPONSE

BASIC RESPONSE HAS FOUR PARTS

$	SEGMENT ACRONYM	OPERATOR	ARGUMENT
computer instruction	where to look	how	for what

EXAMPLE

$author	equ		eckstrand, g (cntrl s)
(look in author segment)	(find)		(the author name Eckstrand, G)

B-2.3.2 AFHRL Segments

For the AFHRL file, the segments are listed as follows:

SEGMENT NO.	SEGMENT ACRONYM	FULL HEADING
1	ACNUM	AVIONICS CENTRAL NUMBER
2	UPDATE	LAST DATE OF UPDATE
4	ORIGACT	ORIGINATING ACTIVITY
8	CLASS	REPORT SECURITY CLASSIFICATION
12	DECLASS	REPORT DECLASSIFICATION CODE
16	TITLE	REPORT TILE
20	DNOTES	DESCRIPTIVE NOTES
24	AUTHOR	REPORT AUTHOR
28	DATE	REPORT DATE
32	PAGES	NUMBER OF PAGES
36	REFERENCES	NUMBER OF REFERENCES
40	CONTR/PROJ	CONTRACT, PROJECT, TASK, WORK UNIT
44	REPORTNR	ORIGINATOR REPORT NUMBER
48	OTHERNR	OTHER REPORT NUMBER
52	DISTRIBUTE	DISTRIBUTION STATEMENT
56	SNOTES	SUPPLEMENTARY NOTES
60	SPONSOR	SPONSORING ACTIVITY
61	TYPPUBL	TYPE OF PUBLICATION
62	CITN	CITATION

SEGMENT NO.	SEGMENT ACRONYM	FULL HEADING
63	ABSTRTYP	ABSTRACT TYPE AND DESCRIPTIO
64	ABSTRACT	ABSTRACT
65	CONCL	CONCLUSIONS
66	EVAL	EVALUATION
68	KEYWORDS	KEYWORDS
69	UNIQWDS	UNIQUE KEYWORDS
72	SYMBOL	LOCATION SYMBOL
76	SAFE/CAB	LOCATION FILE
80	COMMENTS	COMMENTS
100	RSCHMETH	RESEARCH METHOD
104	APPAR/MEDI	APPARATUS/MEDIA USED
108	SUBJPOPN	SUBJECT POPULATION
112	INDVAR	INDEPENDENT VARIABLE
116	DEPVAR	DEPENDENT VARIABLE
120	MEAS/STAT	MEASUREMENT/STATISTICAL METHODS
124	ADDNLRSCH	ADDITIONAL RESEARCH SUGGESTIONS
128	CROSSREF	CROSS REFERENCES
132	QUALINDEX	OVERALL QUALITY INDEX

B-2.3.3 Operators

LOGICAL OPERATORS

EQU (equals) MEANS LOGICALLY CONTAINS WORD OR PHRASE

NEQ (not equal) MEANS LOGICALLY DOES NOT CONTAIN WORD OR PHRASE

ARITHMETIC OPERATORS

AEQU MEANS ARITHMETICALLY EQUAL TO

ANEQ MEANS ARITHMETICALLY NOT EQUAL TO

LSS MEANS ARITHMETICALLY LESS THAN

NLS MEANS ARITHMETICALLY NOT LESS THAN

GTR MEANS ARITHMETICALLY GREATER THAN

NGT MEANS ARITHMETICALLY NOT GREATER THAN

B-2.3.4 Specific Procedures

A REVERSE ARROW← OR BACKSPACE KEY ERASES THE PRECEDING LETTER, THUS PERMITTING CORRECTIONS

EXAMPLE

$title eu←qu instu←ruct ion

THE COMMAND $ANY MEANS TO LOOK IN ALL SEGMENTS

EXAMPLE

$any equ comPuter (cntrl s)

TO SEARCH FOR A PHRASE, PUT SINGLE QUOTES AROUND PHRASE

EXAMPLE

$any equ 'adjunct Programming' (cntrl s)

TRUNCATION FOR WORD STEM SEARCHING IS ACCOMPLISHED BY ASTERISKS: AN ASTERISK IS LIKE A 'WILD CARD' PERMITTING A MATCH WITH ANY LETTER

$title equ measur*****(cntrl s)

THIS EXPRESSION WILL RETRIEVE MEASURE, MEASURED, MEASURING, AND MEASUREMENT

B-2.3.5 Connectors

CONNECTORS PERMIT VARIOUS MULTIPLE LEVELS OF SEARCHING FOR A GIVEN REQUEST

'AND' TENDS TO NARROW SEARCH; ALL SEARCH SPECIFICATIONS MUST BE SATISFIED TO CAUSE RETRIEVAL

Example

$title equ instructor and motivation (cntrl s)

(TITLE MUST CONTAIN BOTH WORDS, BUT NOT NECESSARILY AS A PHRASE)

Example

$title equ instructor and $abstract equ motivation (cntrl s)

(THE WORD INSTRUCTOR MUST APPEAR IN TITLE, AND THE WORD MOTIVATION MUST APPEAR IN ABSTRACT SEGMENT)

'OR' TENDS TO BROADEN SEARCH; IF ANY SEARCH SPECIFICATION IS SATISFIED, RETRIEVAL WILL RESULT

Example

$title equ training or instruction or education (cntrl s)

IF ANY ONE OF THE THREE SPECIFIED WORDS TRAINING, INSTRUCTION, OR EDUCATION APPEARS IN THE TITLE, RETRIEVAL WILL RESULT

Example

$title equ learning or $author equ miller, h r (cntrl s)

EITHER THE TITLE MUST CONTAIN THE WORD LEARNING OR THE AUTHOR MUST BE H.R.MILLER

B-2.4 MODIFYING A SEARCH

MESSAGE

XXX ANSWERS, HOW DO YOU WANT TO PROCESS THEM: NO, PRINT, MODIFY, OUTPUT, OR ENTER OUTPUT AND DEVICE. (151)
REPLY

RESPONSE

THE USER HAS THREE OPTIONS AT THIS POINT

1. ENTER NO TO END SEARCH (COMPUTER RECYCLES TO START)

2. ENTER MODIFY TO AMEND SEARCH REQUEST

3. DEFINE DISPLAY OUTPUT

EXAMPLE

modify (cntrl s)

MESSAGE

ADD NUMBER nnn MODIFICATION. (Ø49)

RESPONSE

TO NARROW SEARCH ADD NEW REQUEST SPECIFICATION WHICH STARTS WITH CONNECTOR AND

TO BROADEN SEARCH ADD NEW REQUEST SPECIFICATION WHICH STARTS WITH CONNECTOR OR

EXAMPLE

$title equ cognition (ORIGINAL REQUEST)

ADD and $abstract equ retention (NARROWER)

ADD or $any equ cognition (BROADER)

THE COMPUTER WILL PERFORM THE MODIFIED SEARCH AND REPEATS MESSAGE

XXX ANSWERS, HOW DO YOU WANT TO PROCESS THEM:

NO, PRINT, MODIFY, OUTPUT, OR ENTER OUTPUT

AND DEVICE. (151)

REPLY

RESPONSE

USER ENTERS RESPONSE AS ABOVE

NOTE: TO RETURN TO PREVIOUS MODIFICATION THE COMMAND IS $$mx WHERE x IS THE MODIFICATION NUMBER DESIRED

B-2.5 DISPLAYING SEARCH RESULTS

B-2.5.1 Defining Display

XXX ANSWERS, HOW DO YOU WANT TO PROCESS THEM:
NO, PRINT, MODIFY, OUTPUT, OR ENTER OUTPUT
AND DEVICE. (151)
REPLY

RESPONSE

TO DISPLAY RETRIEVED INFORMATION, USER ENTERS OUTPUT OPTION AND WHETHER THE USER WANTS TO SEE IT AT THE TERMINAL OR TO PRINT HARDCOPY AT THE CENTRAL FACILITY PRINTER

OUTPUT OPTIONS

HITS	COMPUTER DISPLAYS ONLY SEGMENTS IN WHICH SEARCH REQUEST WORD(S) WAS FOUND.
KWIC-IT	COMPUTER DISPLAYS ONLY SEGMENTS IN WHICH SEARCH REQUEST WORD(S) WAS FOUND, AND ONLY THE WORDS IN CONTEXT AROUND THE SEARCH WORD.
00	(ZERO-ZERO) COMPUTER DISPLAYS ALL SEGMENTS OF RETRIEVED DOCUMENTS.
99	COMPUTER DISPLAYS ONLY SEGMENTS DESIRED BY USER
HIT-N-PIC KWIC-N-PIC	SIMILAR TO HITS AND KWIC-IT, EXCEPT COMPUTER DISPLAYS ADDITIONAL SEGMENTS DESIRED BY USER

IF EITHER 99, HIT-N-PIC, OR KWIC-N-PIC OPTIONS ARE SPECIFIED, COMPUTER RESPONDS WITH

MESSAGE

ENTER SEGMENTS TO BE DISPLAYED IN ANSWERS

RESPONSE

ENTER ACRONYMS OR NUMBERS OF SEGMENTS DESIRED, SEPARATED BY COMMAS, NO COMMA AFTER LAST SEGMENT

PRESS CONTROL AND X-OFF(S) KEYS SIMULTANEOUSLY

EXAMPLE

99 (cntrl s)

ENTER SEGMENTS TO BE DISPLAYED IN ANSWERS

1, 16 (cntrl s)

EXAMPLE

ØØ, P (cntrl s)

ALL SEGMENTS FOR ALL RETRIEVED DOCUMENTS WILL BE PRINTED OFFLINE AND MAILED TO THE USER

B-2.5.2 Activating Display

PRIOR TO DISPLAY, THE COMPUTER SENDS THIS MESSAGE:

MESSAGE

SET PAPER (IF NECESSARY), PRESS SPACE BAR TWICE, AND TRANSMIT. (225)
REPLY

RESPONSE

SET PAPER

PRESS SPACE BAR TWICE

PRESS CONTROL AND X-OFF(S) KEYS SIMULTANEOUSLY

WHEN ALL DATA HAVE BEEN DISPLAYED, COMPUTER SENDS THIS MESSAGE

MESSAGE

END OF OUTPUT FOR THIS QUERY. (227)
REPLY

RESPONSE

PRESS CONTROL AND X-OFF(S)KEYS SIMULTANEOUSLY

COMPUTER THEN RECYCLES BACK TO THE BEGINNING WITH THIS MESSAGE

MESSAGE

AFHRL, LKWIC
IS THE CURRENT FILE, MESSAGE OPTION ANSWER
YES TO CONTINUE OR ENTER FILE, MESSAGE OPTION

RESPONSE

TO STAY WITH THIS FILE AND MESSAGE OPTION, TYPE YES

PRESS CONTROL AND X-OFF(S) KEYS SIMULTANEOUSLY

TO SIGN OFF, REPLACE TELEPHONE RECEIVER AND TURN OFF TERMINAL